

Amendments to the Specification:

Please replace Paragraph [0007] as filed with the following replacement paragraph:

[0007] The present invention utilizes a search filter to solve the problems described
5 above. "Search filter" is the method of searching words or documents proposed by
Severance and Lohman in 1976. The principle of the method is that: selecting a Hash
function, such as MD5 first; taking a value to be searched, such as "m", as the "key"
of the Hash function, such as $f(m)$ to perform a Hash ~~Hash~~ operation and obtain a
proper data structure arrangement; and using the data structure to select the values to
10 be checked. When a key is selected, it is not sure ~~that~~ if the key can be found ~~find~~ in
a search set according to the property of search filter, because the Hash space that the
search filter uses is limited. On the other hand, when a ~~key~~ selected key does not
belong to a search set, the search filter ~~determines~~ assures that the key does not belong
to the search set.

15 **Please replace Paragraph [0018] as filed with the following replacement paragraph:**

[0018] (a) ~~Suppose~~ Supposing that the firewall 20 in the Fig.1 has N firewall rules
 $\{1 \leq i \leq N \mid r_i\}$, wherein each rule consists of five items ~~itmes~~: {source network rinets,
20 destination network rinetd, source port riports, destination port riportd, protocol rip}.
Each network described in the above rules includes the IP addresses that users ~~want~~
intend to filter and then remove.

Please replace Paragraph [0024] as filed with the following replacement
25 **paragraph:**

[0024] Like the filtering procedure of the source network rinets described before,
the filtering procedures of the destination network rinetd for the same firewall rule r_i
are ~~to repeat~~ repeating the procedures S400 to S450 ~~S250~~: by first converting the

destination network rinetd into the binary code (including bit values and address), then setting W addresses bw ($0 \leq bw \leq L-1$, $0 \leq w \leq w-1$) having bit value "1", destination port riportd and protocol rip as the keys of the hash function, and ~~substituting~~ introducing the keys into K specific hash functions hi (such as hi (bw, riportd, rip)) for hash calculation in order to get K*M values kj between 0 ~~to~~ and (C*K*L)-1. These kj include the relative addresses pointing to a hash space Hd in the destination network rinetd. The set of the relative addresses pointing to a hash space Hd can express the characteristic value of the source network rinets in the hash space Hd. Notice that each hash space uses the same C, K and L, so the size of the hash space Hd mentioned above equals ~~the size that~~ of the hash space Hs, ~~and also equals-~~ sizes as well as each of other hash spaces.

Please replace Paragraph [0031] as filed with the following replacement paragraph:

15 [0031] Firstly in the procedure S500 S550, ~~the method receives~~ a packet p to be checked is received. In the procedure S505, ~~the method extracts~~ a source IP pips is extracted from the packet. In the procedure S510, ~~the method converts~~ the source IP pips of the packet is converted into binary code. In the procedure S515 S505, ~~the method searches a search~~ for a set of M' relative addresses bm ($0 \leq bm' \leq L-1$, $0 \leq m \leq M-1$) which have bit values "1" from the code of the source IP pips is conducted. In the procedure S520, ~~the method sets~~ each address having a bit value "1", source port pports and protocol ~~pp~~, pp are set as the keys of the hash function, and ~~substitutes~~ introduce the keys into K hash functions hi (such as hi (b"m, pports, pp)) 20 for hash calculation in order to obtain K*M values kj between 0 ~~to~~ and (C*K*L)-1. These kj include the relative addresses pointing to a hash space H's in the source IP pips. As ~~the~~ described in the procedure S525, the setting of the relative addresses pointing to a hash space H's can present the characteristics of the source IP pips in the hash space H's.

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